

: f]hn' < UUfa Ubb.'8 Ug'ZfU[k ØfX][Y
; i hUW hYb'Y]bYg'A ÒfXYfg']b'; Òhh]b[Yb

9]b'ZY\`Yf\UZhYg'; i hUW hYb'ØVYf'GYf]Yba ÒfXYf': f]hn
< UUfa Ubb'Ui g'; Òhh]b[Yb'k]fZhi: fU[Yb'ni f'dgmW]Uhf]gWYb
6Yi fhY]i b['j cf'%'\$'\$\`Yb'Ui Z'

⇒ \f%- &('k]fX'X]Y'XYi hgWY'; YgY`gW UZh'Xi fW'X]Y
J Yf\UZh b['XYg'GYf]Yba ÒfXYfg': f]hn' < UUfa Ubb'YfgW ØhhYfh''8 Yf
: U''gh]b]W h'bi f'k Y[Yb'XYf'gW fYW_]W Yb'HUHyb'j cb' < UUfa Ubb
VY_Ubbhž'gcbXYfb'Ui W'k Y[Yb'XYf'_cbhfcj YfgYb'dgmW]Uhf]gWYb
6Y[i hUW hi b[ž'X]Y'Yf']b'; Òhh]b[Yb'Yf\]Y'h" < UUfa Ubbž'XYf'Ua
< Ui dhVU\b\cZ' < Ubbcj Yf'ZYgh[Ybca a Yb'k i fXYž'k Uf'j YfXÅW h][h
k cfXYbž'nU\`fY]W Y'† b[Y'A ÅbbYf'Yfa cfXYh'i bX']\fY '@Y]W Yb
j YfghØa a Y'h'ni '\UVYb''8]YgY'; fÅi Y'hUHyb''UggYb'X]Y'XUa U'] [Y
; YgY`gW UZh]b]W h'a Y\f`cg'i bX'ZØ\fhYb'ni 'Y]bYa '† f]gh]gWYb
J YfZU\`fYbž'XUg'V]g'\Yi hY'U'g'fYW h]W'ZfU[k ØfX][' []'h"

8]Y'dgmW]Uhf]gWY' l bhYfgi W i b['ZUbX'j b'Y]bYf' < Y]!' i bX
DZY[YUbg hU'h]b'; Òhh]b[Yb'ghUhhž'k c' < UUfa Ubb'ZØf'gYW g'K cW Yb
i bhYf[YVfUW h'k Uf''8 Yf'DgmW]Uhf' DfcZYggc f'9fbgh'GW i 'n'k i fXY
a]h'XYf'5i Z[UVY'VYhfUi hž'X]Y'Ni fYW bi b[gZÅ\][_Y]h]j cb
< UUfa Ubb'ni 'ØVYfd fØZb''K]W h][']gh'\]Yfž'XUgg'XYf'; i hUW hYf
b]W h'VYY]bZi ggh'gY]b'gc`hY' 'Y]b'; fi bXgUhnž'XYf']a ' : U`
< UUfa Ubb'YXcW 'b]W h'Y]b[Y\U'hYb'k i fXY"

8]Y'6YXYi hi b['XYg'; i hUW hYbg

8 Ug'9f[YVb]g'XYg'; i hUW hYbg'k Uf'j cb'YbhgW Y]XYbXYf
6YXYi hi b['ZØf'XUg'UbgW'Y]Y» YbXY'; Yf]W hgj YfZU\`fYb''GW i 'n'_Ua
ni 'XYa 'GW' i ggž'XUgg' < UUfa Ubb'ni fYW bi b[gZÅ\]['k Uf'i bX
gca]h'X]Y'j c''Y'J YfUbhk cfhi b['ZØf'gY]bY'HUHyb'hfi [''8]Yg'YVbYhY

XYb`K Y[`ZØf`X]Y`F YW hgZc`[Ybž`X]Y`X]Y`ÖZZYbh]WXY`A Y]bi b[`XYf
XUa U`][Yb`NY]hj Yf`Ub[hY`"æ `8YnYa VYf`%- &(`k i fXY`<UUfa Ubb
k Y[Yb`&(!ZUWYb`A cfXYg`ni a `HcXY`j Yfi fhY]`h`8]YgYg`l fhY]`\\Uh
gck c`\\`fYW h]WXY`U`g`Ui W`[YgY`gW UZh]WXY`F Y`Yj Ubn"

8]Y` : fU[Y`XYf`Ni fYW bi b[gZÀ`][_Y]hj cb`HÀhYfb`]gh[fi bX`Y[YbX
ZØf`XUg`GhfUZfYW h`9]b` ; i hUW hYf`gc`hY`]a a Yf`X]Y`l a ghÀbXY`i bX
X]Y`dgmW]gW Yb`Ni ghÀbXY`Y]bYg`HÀhYfg`cV`Y`_hj `Ub`ØfYb`i bX
VYk YfhYb`"6Y]`XYf`5i gk Yfhi b[`XYf`Dfchc`_c`Y`j cb`XUa U`g`ghY`hY
`YXcW`X]Y`ZcfYbg]gW Y`DgmW]UhYf]b`7`f]gh]bY`Dcng`½`ZY ghž`XUgg
X]YgY` ; fi bXgÀhY`]a ` : U`j cb`<UUfa Ubb`b]W h`Y]b[Y`U`hYb
k i fXYb"

GW i `n`6YfUhi b[`k Uf`b]W h`bi fi bdfcZYgg]cbY`ž`gcbXYfb
VY]b`U`hYhY`Ui W`VY`Y]X][YbXY`Yi » Yfi b[Ybž`k]Y` 9]b`gc`W Yg
GW k Y]b`k]Y`G]Y`\\UVY`]W`bcW`b]W h`[YgY`Yb`" `GY]b`J Yf`U`hYb
k Uf`gca]h`b]W h`bi fi`a`<]bV`]W`Ui Z`X]Y`B Yi hfU`hÀh`ZFU[k ØfX][ž
gcbXYfb`Ui W`gY]bY`6Yk Yfhi b[ga U» ghÀVY`k UfYb`j cb
dYfgØb`]W Yb`a cfU`]gW Yb` , VYfnYi [i b[Yb`[YdfÀ[h`Dcng`½`
Ya dZUbXž`XUgg`GW i `n`<UUfa Ubbg`HUhYb`b]W h`Ui g`XYa
]bX]j]Xi Y`Yb`9f`VYb`XYg`HÀhYfg`UV`Y]hYhYž`gcbXYfb`gcZcfh`bUW
fY`][]ØgYb`i bX`a cfU`]gW Yb`A U» ghÀVYb`i fhY]`hY"

J Yfb UW `Àgg][hY`<]bhYf[fØbXY`i bX
?]bX`Y]hghfUi a UhU

9]b`k Y]hYfYf`VYXYi hYbXYf`?f]h]_di b`h`Ua` ; i hUW hYb`]gh`X]Y
J Yf`Yhni b[`XYf`[fi bX`Y[YbXYb`Df]bn]d]Yb`XYf`ZcfYbg]gW Yb
DgmW]UhYf]Y`"9g`k i fXY`j YfgÀi a hž`Ui Z`k]W h][Y`5gdY`_hY`j cb
<UUfa Ubbg`?]bX`Y]h`i bX`ž` [YbX`Y]bni [Y`Yb`"8]YgY
@VYbYgUVgW b]hY`k]YgYb`gW k YfY`dgmW]gW Y`6Y`Ughi b[Yb`Ui ž
XUfi bhYf`Y]b`f]g]_cVY`UZhYhYg`J Yf`À`hb]g`ni`gY]bYa`J UhYf`gck]Y
gYi i Y`Yf`A]ggVfUi W`Xi fW`gY]bYb`À`hYfYb`6fi XYf`"Gc`W Y
9fZU`fi b[Yb`_ØbbhYb`Y]bYb`Yf`YV`]W Yb`9]bZi`gg`Ui Z`X]Y
9bhk]W`i b[`Y]bYf`DYfgØb`]W _Y]hgghØfi b[`i bX`XUa]h`Ui Z
<UUfa Ubbg`gdÀhYfY`HUhYb`[Y`UVh`\\UVYb"

Hfchn`XYf`cZZYbg]W h]W Yb`F Y`Yj Ubn`X]YgYf`æZcfa Uh]cbYb`k i fXYb

g]Y`]b`GwX i `n `; i hUwX hYb`b]wX h`VYfØW_g]wX h][h`9g`]gh`g]wX hVUfž
XUgg`GwX i `n`b]wX h`X]Y`NY]h`i bX`A Ø\Y`Ui Zk UbXhYž`i a `<UUfa UbBg
_ca d`YI Y`dgmwX]gWxY`J YfZUggi b[`j c`ghAbX][`ni `VY[fY]ZYbž`k Ug
gY]bY`6Yi fhY]`i b[`ghUf`_Y]bgWx fAb_hY"

<UUfa UbBg`HUHyb`ZUbXYb`gWx`Y»`]wX`Ua`%)`"5df)`%-&)`Xi fWx
XUg`:`U`VY]`]\f`hfU[]gWxYg`9bXY`"I ba]hhY`VUf`j cf`gY]bYf
<]bf]wX hi b[`Ai »YfhY`<UUfa UbBg`gY]bY`YhnhYb`K cfhY.`5i Z
K]YXYfgY\Yb ž`k Ug`Y]b`VYXfØW_YbXYg`6]`X`gY]bYf`<U`hi b[
k]XYfgd]Y[`Y`h"

9]b`V`Y]VYbXYg`9fVY`XYf`; fUi gUa`_Y]h

<UUfa UbBg`]gh`b]wX h`bi f`Ui Z[fi bX`gY]bYf`J YfVfYwX Yb`]b`X]Y
; YgWx]wX hY`Y]b[Y[Ub[Ybž`gcbXYfb`Ui wX`k Y[Yb`gY]bYf
dcgh`i a Yb`DfAgYbn`]b`XYf`U_UXYa]gWxYb`K`Y`h`BUwX`gY]bYf
<]bf]wX hi b[`k i fXY`<UUfa UbBg`GwX`AXY`U`g`:`cfgWx i b[gcV`Y`_h`Ub
X]Y`I b]j Yfg]h`A`h;`Øhh]b[Yb`ØVYf[YVYb`"8]Yg`ZØ\fh`ni`Y]bYf
_cb`hfcj YfgYb`8]g_i gg]cb`ØVYf`9h\`_i bX`A cfU`]b`XYf
a YX]n]b]gWxYb`:`cfgWx i b["8Yf`Df`AdUf]YfhY`GwX`AXY`k i fXY`V]g
&\$%(`Ui ZVYk U\fhž`VYj cf`Yf`gWx`Y]»`]wX`Y]b[YAgWxYfh`i bX`Ubc`bma
VYghUhhYh`k i fXYž`k Ug`X]Y`Gdi fYb`X]YgYf`XØghYfYb`; YgWx]wX hY
gma Vc`]gWx`VYgY]h][hY`<UUfa UbBg`:`U`V`Y]Vh`b]wX h`bi f`Y]b
6Y]gd]Y`ZØf`X]Y`; fYbnYb`XYf`dgmwX]Uhf]gWxYb`6Y[i hUwX hi b[ž
gcbXYfb`Ui wX`ZØf`X]Y`J YfU`b`hk cfhi b[`XYf`; YgY`gWxUž`ž`a]h
gc`WxYb`; fAi Y`hUHyb`i a ni [Y\Yb"

8]Y`:`U`[YgWx]wX hY`j cb`:`f]hn`<UUfa UbBg`V]YhYh`b]wX h`bi f`Y]bYb
9]bV`]W`_]b`X]Y`DgmwX]Uhf]Y`XYf`%-&\$Yf`X\Yž`gcbXYfb`fYZY`_h]Yfh
Ui wX`X]Y`[YgY`gWxUž`]wX Yb`i bX`ghfi`_hi fY`Yb`9b`hk]W`_i b[Yb`]a
I a [Ub[`a]h`dgmwX]gWxYb`9f`_fUb`_i b[Yb`i bX`XYa`F`YwX`hggmghYa`"
=b`XYf`NY]h`<UUfa UbBg`k`Uf`X]Y`DgmwX]Uhf]Y`ghUf`_Xi fWx`X]Y
5bg]wX hYb`XYf`Yk`Y]`][Yb`; i hUwX hYf`[YdfA[hž`X]Y`cZ]j`cb
dYfgØb`]wX Yb`,`VYfnYi [i b[Yb`cXYf`[YgY`gWxUž`]wX Yb`B`cfa`Yb
VYY]bZi`ggh`k`UfYb`"8]YgY`G]hi`Uh]cb`ZØ\fhY`\`Ai`Z][`X`Uni`ž`XUgg
DUh]Yb`hYb`b]wX h`cV`Y`_h]j`VYi`fhY]`h`k i fXYb`i bX`X]Y
H\YfUd]Y`Ubg`Ah`nY`ni bY`a`YbX`U`g`a`cfU`]gWx`Zi`bX]Yfh`VYhfUwX`hYh
k i fXYbž`UbghUhh`g]wX`Ui`Z`a`YX]n]b]gWxY`9j`]XYbn`ni`ghØhnYb"

8]Y'ØVYf[fY]ZYbXY'9bhk]W_ i b['ja 'XYi hgWXYb'; Ygi bX\Y]hgk YgYb
XYg'ZfØ\Yb'&\$" ð\ f\ i bXYfhg'i bhYf'U['j YfgW]YXYbYb
J YfÅbXYfi b[Ybž'X]Y'gck c\`dc`h]gWXY'U'g'Ui W'gcn]U'Y'5gdY_hY
VYfØ\fhYb" Dfc[fUa a Y'ni f'9i [Yb]_ i bX'X]Y'J cfghY`i b['j cb
fUggYb\m[]Yb]gWXYb '5gdY_hYb'VYY]bZi » hYb'X]Y'DgmW]Uhf]Y
Yf\YV'W]Wžk Ug'ni 'Y]bYa 'hY]g'a YbgWXYbj YfUW.hYbXYb'l a [Ub[
a]h'dgmW]gW' _fUb_Yb'A YbgWXYb'ZØ\fhY" < UUfa Ubbg': U`ghY\h
VY]gd]Y'\UZh'ZØf'X]Y'DfcV'Ya Yž'X]Y': fUi Yb'i bX'A ÅbbYf'a]h
dgmW]gWXYb'9f_fUb_i b[Yb'VYgcbXYfg]b'XYf'K Y]a UfYf'FYdi V`_
Yf'YVhYb"

DgmW]Uhf]gWXY'; i hUW hYb']a 'K UbXY`XYf NY]h

8Yf'l a [Ub['a]h'dgmW]Uhf]gWXYb'; i hUW hYb'\Uh]g]W'gY]h'XYb
%- &\$Yf'ð\ fYb'[Yk UbXY'h'K Å\ fYbX'XYg'ZfØ\Yb'&\$" ð\ f\ i bXYfhg
'U['XYf': c_i g'cZh'XUfUi Zž'X]Y'Ni fYW]bi b[gZÅ\[_Y]h'ni 'VYk YfhYbž
i a 'X]Y'ghfUZfYW]h]WY'J YfUbhk cfh]W_Y]h'ni 'VYgh]a a Yb" ð'XYf
\Yi h][Yb'NY]h'k]fX']b'XYf': cfYbg]gWXYb'DgmW]Uhf]Y'j]Y'ghÅf_Yf
Ui ZY]bY'i a ZUggYbXY'8]U[bcgh]_[YUW hYhž'VY]'XYf'V]c'c[]gWYž
dgmW]c'c[]gWY'i bX'gcn]U'Y': U_hcfYb']b'X]Y'6Yk Yfhi b[
Y]bZ]Y» Yb"

Ni XYa '\UVYb'g]W'X]Y'5bgdfØWXY'Ub'; i hUW hYf'j YfÅbXYfh"8]YgY
a ØggYb'\Yi hY'b]W]h'bi f'bYi hfU`i bX'cV'Y_h]j 'V'Y]VYbž'gcbXYfb
Ui W']b'XYf'@U[Y'gY]bž'X]Y']bX]j]Xi Y`Y'@VYbg[YgW]W]hY'XYg
6Y[i hUW hYhYb'Y]bni cfXbYb'i bX'U_hi Y`Y'k]ggYbgWUZh]WY
9f_Ybhb]ggY'ni 'VYfØW_g]W]h][Yb"9]b'6Y]gd]Y'ZØf'X]Y'9bhk]W_ i b[
]b'XYf'ZcfYbg]gWXYb'DgmW]Uhf]Y'gh'X]Y'æ d'Ya Ybh]Yfi b['XYf
8 GA !) !? f]hYf]Yb'fB]U[bcgh]gWYg'i bX'GhUh]gh]gWYg'A Ubi U`
DgmW]gWYf'GhØfi b[Ybłž'X]Y'Y]bY'ghUbXUfX]g]YfhY
8]U[bcgYghY`i b['Yfa Ø['WXYb"

5_hi Y`Y'Ghi X]Yb'ØVYf'GYf]Yba ØfXYf'i bX XYfYb'<]bhYf[fØbXY

ð'XYb'YhnhYb'ð\ fYb'\Uh'Yg'a Y\ fYfY'Ghi X]Yb'[Y[YVYbž'X]Y'g]W

a]h`Y]bYa `VYggYfYb`J YfghAbXb]g`XYf`A ch] Uh]cb`i bX`XYg
J Yf\U`hYbg`j cb`GYf]Yba `OfXYfb`VY ZUggYb`"9]bY`l bhYfgi Wk i b[
ØVYf`X]Y`dgmWk cgc n]U`Yb`<]bhYf[fØbXY`j cb`GYf]Yba `OfXYfb`]b
8Yi hgWk`UbX`U`h[YnY][hž`XUgg`nU`fY]Wk Y`HÅhYf`Å`b`]Wk`k]Y
<UUfa Ubb`]b`]\fYf`?]bX`Y]h`gWk`k]Yf][Y`J Yf`Å`hb]ggY`Xi fWk`YVh
\UVYbž`X]Y`Y]bYb`Yf`YV`]Wk Yb`9]bZi gg`Ui Z]\fY`9bhk]W`i b[
\UhhYb"

8]YgY`DgmWk cdUh\c`c[]Yb`[Y\`OfYb`Åi Z][`ni`Y]bYa `_ca`d`YI Yb
; YZØ[Yž`XUg`Ya`ch]cbU`Y`J YfbUWk`Ågg][i b[ž`A]ggVfUi Wk`i bX
; Yk U`h`]b`XYf`?]bX`Y]h`i a`ZUggh`"Ghi`X]Yb`VY`Y[Ybž`XUgg`Y]bY
dfÅj Ybh]j Y`<YfUb[Y`Yb`gk`Y]gY`Ui ZY]bY`ZfØ`nY]h][Y`ϕhYfj Ybh]cb
ni`f`J YfVYggYfi b[`XYf`dgmWk cgc n]U`Yb`l a`ghÅbXY`UVn]Y`hž`i a`XYf
9bhghY`i b[`j`cb`[Yk U`h`hÅh][Ya`J Yf`U`hYb`Ybh[Y[Ybni`k]f`_Yb`"

Ni XYa`k]fX`]b`XYf`:`c`fgWk`i b[`]a`a`Yf`a`Y`f`XYf`5gdY`_h`XYg
bYi`fcV]c`c[]gWk`Yb`J Yf`U`hYbgZc`fgWk`i b[gUb`gUhmYg`VYhfUWk`hYhž`XYf
i`bhYfgi`Wk`hž`]bk`]YZf`b`V]c`c[]gWk`VYX]b[hY`:`U`_hc`fYbž
VY]gd]Y`gk`Y]gY`[YbYh]gWk`Y`8]gdc`g]h]cbYbž`ni`Y]bYf`Yf`Ø`hYb
; Yk U`h`VYfY]hgWk`UZh`ZØ`fYb`_`Øb`bYb`"E`i`Y`Yb`k`]Y`X]Y`8Yi`hgWk`Y
; YgY`gWk`UZh`ZØf`DgmWk`]Uhf]Yž`DgmWk`ch`YfUd]Y`i`bX`BYi`fc`c[]Y
V]YhYb`Ui`ZYbX`U`_hi`Y`Y`Di`V`_Uh]cbYb`i`bX`9f`_Yb`b`hb]ggY`ni
X]YgYa`H`Y`Ya`Yb[YV]Yh`Ubž`i`a`X]Y`a`YX]n]b]gWk`Y`DfUI`]g`ni
]bZcfa`]YfYb`i`bX`ni`j`YfVYggYfb"

8YhU]`g

6Ygi`Wk`Yb`G]Y`i`bg`Ui`Z.`X]Y!bUWk`f]Wk`hYb`"bYh