

I bhYf]fX]gW Yf`Ncc `]b`C gbUVfØW_ .
9]bn][Ufh][Y`K Y`h`XYf` < Ò\`YbVYk c\`bYf

9bhXYW_Yb`G]Y`XYb`Y]bn][Ufh][Yb` I bhYf]fX]gW Yb`Ncc `]b`
C gbUVfØW_ž`XYa`Y]bn][Yb`gY]bYf`5fh`]b`8Yi hgW`UbX`ž`i bX`
Yf`YVYb`G]Y`ZUgn]b]YfYbXY` < Ò\`YbVYk c\`bYf`\Ui hbU\`

⇒ `<YfnYb`j cb`B]YXYfgUW`gYbž`[YbUi Yf`[YgU[h`]b`C gbUVfØW_ž`
Yfk UfhYh`6Ygi W`Yf`Y]bY`Ui » Yf[Yk Ò\`b`]W`Y`5hfhU_h]cb.`XYf`
Y]bn][Ufh][Y` I bhYf]fX]gW Y`Ncc ``<]Yf`_ÖbbYb`H]Yf`YV\UVYf`]b`
Y]bY`ZUgn]b]YfYbXY`K Y`h`Y]bhUi W`Ybž`X]Y`g]W`j c``gh`AbX][`i bhYf`
XYf`9fXY`YfghfYW_h``8]YgY`9]b]W`hi b[ž`X]Y`&\$-\$-`YfÖZbYh`k i fXYž`
]gh`XYf`Y]bn][Y`]\fYf`5fh`]b`8Yi hgW`UbX`i bX`V]YhYh`Y]bY`Y]ba`U`][Y`
; Y`Y[Yb\Y]hž` < Ò\`YbVYk c\`bYf`]b`Y]bYf`bUhi f[YhfYi Yb`I`a` [YVi b[
ni`VYcVUW`hYb`"

A]h`Y]bYf`:`ÀW`Y`j cb`) \$\$`E i UXfUha`YhYfb`i bX`Y]bYa`%) \$`A`YhYf`
`Ub[Yb`_i bghj c``[YghU`hYhYb` < Ò\`Yb`gmghYa`k`]fX`Yg`XYb`
6Ygi W`Yfb`Yfa` Ò[`]W`hž`g]W`k`]Y`]b`Y]bYa`YW`hYb`Ghc``Yb`UVmf]bh\`
ni`ZØ\`Yb``8Yf`Ncc`\Uh`Yg`g]W`ni`f`5i`Z[UVY`[Ya`UW`hž`XUg`@YVYb`
j cb`H]YfYb`]b` < Ò\`Yb`ni`Xc`_i`a`Ybh]YfYb`i bX`Yf`YVVUf`ni`a`UW`Yb`"
8]Y` < Ò\`Yb`g]bXž`cV`k c\``_Øbgh`]W`Ub[Y`Y[hž`gc`Ui`h`Yb]gW`
[YghU`hYhž`XUgg`X]Y`6Ygi W`Yf`[`Ui`VYbž`YW`hY`K`]Xh]YfY`ni`g`Y\Ybž`
X]Y`]b`]fYa`bUhØf`]W`Yb`@YVYb`gfUi`a` ``YVYb`"

9]bn][Ufh][Y`9f`YVb]ggY`]a` I bhYf]fX]gW Yb`
Ncc`

6Ygi W`Yf`g]bX`Y]b[Y`UXYbž`X]Y`H]Yfk`Y`h`[Ubn`bU\`ni`Yf`YVYb``A`Ub`
_Ubb`X]Y`H]YfY`gck c\``VY]`XYf`5i`Zni`W`h`]fYf`ž`b[h]YfY`U`g`Ui`W`
VY]`XYf`:`i`hYf`gi`W`Y`cXYf`k`À`fYbX`]fYf`DUUfi`b[gf]hi`U`Y`
VYcVUW`hYb``8Ug`@]W`hgd]Y``]a` `bYfYb`XYg`I`bhYf]fX]gW`Yb`Ncc`g`

gcf[h'ZØf'Y]bY '[Y\Y]a b]gj c`Y`5ha cgd\ÄfYž'i bX`X]Y`j Yfk]b_Y`hYb
; Äb[Y`UXYb`XUni`Y]bž'g]W\`ni`j`Yf`YfYb" K Ä\`Yb`G]Y`ÄfYb`K`Y[
gY`Vgh ž'ghY\`h`Ui`Z`Y]bYa`G`W\`X`Ua`'9]b[Ub[`XYf`Hi`bbY`ž`XUg`XYb
9f`YVb]gZU`hcf`i`bhYfghfY]W`h"

I bhYf`XYb`h]Yf]gW`Yb`6Yk`c`bYfb`XYg`Nccg`VYZ]bXYb`g]W`b]W`h
bi`f`BUW`ha`i`Y`i`bX`F]YgYb[fUi`a`i`Y`ž`gcbXYfb`Ui`W
G`W`k`Ufng`W`k`Ubn!DfÄf]Y\`i`bXY`i`bX`j`Yfg`W`]YXYbY
: `YXYfa`Ui`gUfhYb"Ni`XYa`V]YhYh`XYf`Ncc`Y]bY`VYY]bXfi`W`YbXY
BUW`V]`Xi`b[`Y]bYg`a`]hhY`U`hYf`]W`Yb`5V`k`UggYf`UbU`g`i`bX`Y]bYf
\`ghcf]gW`Yb`?Y`Yffi`]bY`U`g`@YVYbgfUi`a`ZØf`X]Y`Xcfh`YVYbXYb
F`UhhYb"

⇒bcj Uh]j Y`?`c`bnYdhY`n]Y\`Yb
5i gnY]W`bi`b[Yb`bUW`g]W`

8]Y`_fYUh]j Y`ÄYY`\]bhYf`XYa`i`bhYf]fX]gW`Yb`Ncc`k`i`fXY`VYfY]hg
a`]h'a`Y`fYfYb`DfY]gYb`[Yk`ØfX][h`Gc`Yf\]Y`h`X]Y`9]bf]W`hi`b[`b]W`h
bi`f`Y]bYb`Ncc!CgWUf`ž`gcbXYfb`Ui`W`Y]bY`5i`gnY]W`bi`b[`j`cb`XYf
?Ua`dU[bY`8Yi`hgW`UbX`i`@UbX`XYf`ÄYYb`"8]YgY`5bYf`_Ybbi`b[
j`YfXYi`h]W`h`X]Y`⇒bcj`Uh]cbg`_fUZh`XYg`Dfc`Y`hgž`k`Y`W`Yg`Ui`W`Y]bY
J`YfV]bXi`b[`ni`a`BUhi`f`i`bXYa`i`gYi`a`Ui`Zk`Y]ghi`bX`6Ygi`W`Yf
XUni`UbYf[hž`BUhi`f`i`bX`H]Yfk`Y`h`Ui`Z`bYi`Y`K`Y]gY`ni`VYhfUW`hYb"

9]b`VYgcbXYfYg`<][\`][\`h]gh`XYf`6YfY]W`ž`XYf`Y][Ybg`ZØf`X]Y
: `YXYfa`Äi`gY`[YgW`UZZYb`k`i`fXY" <]Yf`XØfZYb`X]Y`6Ygi`W`Yf`]b`X]Y
; fchY`Y]bhUi`W`Yb`i`bX`XUg`bÄW`h]W`Y`HfY]VYb`XYf`H]YfY`]b`Y]bYf
cdh]a`U`bUW`[YV]`XYhYb`i`a`[YVi`b[`Yf`YVYb"5i`W`X]Y`8i`b`_`Yb
9fX\`i`a`a`Y`b`\UVYb`]\fYb`D`Uhn]a`Ncc`[YZ]`bXYbž`i`bX`6Ygi`W`Yf
_ÖbbYb`]bYb`ØVYf`Y]bY`@Y]hYf`[Ubni`bU\`_ca`a`Ybž`gc[Uf`Y]bYf
9fX\`i`a`a`Y`!`?`Öb][`]b"

8]Y`9]bhf]hhgd`fY]gY`g]bX`ZU]f`[YghU`hYh`9fk`UW`gYbY`nU`\`Yb`" \$
9i`fcž`?`]bXYf`nk`]gW`Yb`+`i`bX`%`*`Ä\`fYb`_ca`a`Yb`ZØf`&\$ž)`\$`9i`fc
i`bX`X]Y`[Ubni`?`Y]bYb`nk`]gW`Yb`"i`bX`*`Ä\`fYb`ZØf`%+ž)`\$`9i`fc
\`bY]b"Ä\`f]W`Y`A`]h[`]YXgW`UZhYb`c`ZZYf]YfYb`Ui`»`YfXYa
9fgdUfb]ggY"6Y`Y]Vh]gh`XYf`Ncc`b]W`h`bi`f`ZØf`X]Y`Ui`ZfY[YbXYb
9i`dcbU`hYž`gcbXYfb`Ui`W`ZØf`X]Y`Xi`fW`k`Y[`d`cg]h]j`Y`F`YgcbUbn]j`cb

6Ygi WXYfbž'X]Y']\a 'Ui Z'D'UhhZcfa Yb'k]Y'Hf]dUXj]gcf'Y]bY
6Yk Yfhi b['j cb'(ž) 'j cb') 'GhYfbYb'[YVYb"

8]Y'6Y'YVh\Y]h'XYg'I bhYf]fX]gWXYb'Nccg']ghni ['Y]WXY]bY
@]W h[YghU'h]b'XYf'j Yf['Y]W gk Y]gY'_f]h]gWXYb'8]g_i gg]cb'ØVYf'X]Y
9h_]_j cb'Nccg']bg[YgUa h"K Å\fybX'Y]b][Y
H]YfgWxi hncf[Ub]gUh]cbYb'k]Y'D9H5'X]Y'<U'hi b['j cb'H]YfYb']b
Nccg'\]bhYfZfU[Yb' i bX'g]Y'U'g' ; YZÅb[b]ggY'ZØf'H]YfY
VYnY]WXYbž'\YVh'XYf'I bhYf]fX]gWXY'Ncc'gY]bY'J YfUbhk cfhi b[
\Yfj cfž'ni f'6]Xi b['i bX'GYbg]V']g]Yfi b['ØVYf'H]YfUfhYb' i bX
BUhi fgWxi hn'VY]ni hfU[Yb"8]YgY'ghUf_Yb'5f[i a YbhY'a UWXYb'X]Y
8YVUhhY' i a 'X]Y'Fc''Y'j cb'Nccg']b'XYf'\Yi h][Yb'NY]hi a gc
k]W h][Yf"

9f`YVY`X]Y`H]Yfk Y`h`]b`Y]bYf`bYi Yb 8]a Ybg]cb

9g'V`Y]Vh'UVni k UfhYbž'k]Y'g]WXY'X]Y'8]g_i gg]cb'ØVYf'Nccg'
Ybhk]W_Y'b'k]fXž'XcWXYf'I bhYf]fX]gWXY'Ncc']b'C gbUVfØW_'ghY\h
YI Ya d'Uf]gWXY'ZØf'_fYUh]j Y' i bX']bbc] Uh]j Y'5bgÅhnY'XYf
H]Yf\U'hi b["'8Yf'FY]nž']b'X]Y'K Y'h'XYf'<Ø\`YbVYk c\`bYf
Y]bni hUi WXYbž'_ØbbhY'Ui WXY]b'Ni _i bZh]j]Y'Y'6Ygi WXYf'Ubn]Y\Yb
i bX'a Ø['WXYfk Y]gY'gc[Uf'XUni 'VY]hfU[Ybž'X]Y'5bg]WXYb'ØVYf
X]Y'Fc''Y'j cb'Nccg']b'XYf'; YgY'`gWXYUZh'ni 'k UbXY'b"

8Yf'I bhYf]fX]gWXY'Ncc']b'C gbUVfØW_]gh'b]WXYh'bi f'Y]b'C fh'ZØf
i b[Yk Ø\`b']WXY'H]YfVYcVUWXYh' b[Ybž'gcbXYfb'gd]Y'h'Ui WXY]bY
Fc''Y]b'XYf'8]g_i gg]cb'ØVYf'a cXYfbY'H]Yf\U'hi b[gdfU_h]_Yb"
K Å\fybX'hfUX]h]cbY''Y'Nccg']a a Yf'\Åi Z][Yf']b'XYf'?f]h]_ghY\Ybž
bYi Y'k]ggYbgWXYUZh]WXY'9f_Yb'bh]ggY'i bX'Yh\]gWXY'GhUbXUfXg
Ui Zni [fY]ZYbž'V]YhYh'XYf'I bhYf]fX]gWXY'Ncc'Y]bY']bbc] Uh]j Y
<YfUb[Y\Ybgk Y]gYž'X]Y'gck c\`'6]Xi b['U'g'Ui WXY'XUg
K c\`VYZ]bXYb'XYf'H]YfY']b'XYb'J cfXYf[fi bX'ghY''h"

⇒ a Yf'a Y\`f'9]bf]WXYh' b[Yb'j Yfgi WXYbž'X]Y'@YVYbgVYX]b[i b[Yb
j cb'H]YfYb'ni 'j YfVYggYfb' i bX']bhYfU_h]j Y'9f'YVb]ggY'ni 'gWXYZZYbž
X]Y'XYb'6Ygi WXYfb' b]WXYh'bi f'XYb'@YVYbgfUi a 'XYf'H]YfY'bÅ\Yf
Vf]b[Ybž'gcbXYfb'Ui WXY]b'6Yk i gghgY]b'ZØf'XYggYb'9f\U'h

Z0fXYfb"8]Yg[YgW\Y\hcZiXi fW]a a Yfg]j Y`l a [YVi b[YbžX]Y
XYb`bUh0f`]WYb`@YVYbgfAi a Yb`bUWYa dZ bXYb`g]bXž`A\`b`]W
k]Y`ja `l bhYf]fX]gWYb`Nccž`k c`X]Y` ; YghU`hi b[`XYf`<0\`Yb`i bX
; Ab[Y`Ub`bUh0f`]WY`<0\`Yb`Yf]bbYfh"

<]bhYf[fi bX`ni f`H]YfgW i hnXYVUhhY

8]Y`U``[Ya Y]bY`8YVUhhY`0VYf`Nccg`i bX`H]Yf\U`hi b[`]gh]b`XYb
`YhnhYb`>\fYb`]bhYbg]j Yf[Yk cfXYbž`]bgVYgcbXYfY`ja `?cbhYl h
XYg`H]YfgW i hnYg" `H]YfgW i hncf[Ub]gUh]cbYb`k]Y`D9H5`i bX`UbXYfY
gYhnYb`g]W`j Y\Ya Ybh`Z0f`X]Y`F`YW`hY`j cb`H]YfYb`Y]b`i bX
_f]h]g]YfYb`X]Y`6YX]b[i b[Yb`]b`hfUX]h]cbY`Yb`Nccg"8]YgY
C f[Ub]gUh]cbYb`Uf[i a Ybh]YfYbž`XUgg`j]Y`Y`H]YfY`]b`Nccg
Ui Z[fi bX`XYf`9]bgW`fAb`_i b[Yb`]\fYf`l a [YVi b[`dgmW]gWY`i bX
d\mg]gWY`DfcV`Ya Y`Yb`hk]W_Y`b"8Yf`l bhYf]fX]gWY`Ncc`]b
C gbUVf0W`_j Yfgi W`hž`X]YgY`6YXYb`_Yb`ni `UXfYgg]YfYbž`]bXYa`Yf
Ufh[YfYW`hY`@YVYbgfAi a Y`[YgW`UZYb`\Uhž`X]Y`XYb`bUh0f`]WYb
6YX]b[i b[Yb`XYf`H]YfY`bA\Yf`_ca a Yb"

9]b`nYb`hfU`Yf`6YghUbXhY]`XYf`?f]h]_`Ub`Nccg`]gh`X]Y` : fU[Y`bUW
XYf`5fh`XYf`<U`hi b[.`8Yf`l bhYf]fX]gWY`Ncc`Z0fXYfh`Y]bY
l a [YVi b[ž]b`XYf`X]Y`H]YfY`U`_hj`VYcVUW`hY`h`k YfXYb`_0bbYbž
k A\`fYbX`[`Y]W`nY]h][`]\f`bUh0f`]WYf`@YVYbgfUi a `g]a i `]Yfh`k]fX"
8]Yg`Z0fXYfh`X]Y`>bhYfU`_h]cb`nk]gWYb`H]Yf`i bX`6Ygi W`Yf`i bX
V]YhY`h`9]bV`]W_Y`]b`XUg`@YVYb`j cb`5fhYbž`X]Y`gcbgh`gW`k Yf`ni
VYcVUW`hYb`k A`fYb"8]Y`A`0[`]W`_Y]hž`g]W`]b`Y]bYa`bUW`[YVUi`hYb
@YVYbgfUi a`ni`VYk`Y[Ybž`k`c`X]Y`H]YfY`b]W`h]b`?AZ[Ybž`gcbXYfb
]b`bUhi`fbU`Yb`5b`U[Yb`YVYbž`_0bbhY`U`g` : cfhgW`f]h]b`XYf
ncc`c[]gWYb`<U`hi b[`Ub[YgY\Yb`k`YfXYb"

5`_hi Y``Y`8UhYb`i bX`GhUh]gh]_Yb`ni f H]Yf\U`hi b[`]b`Nccg

@Ui`h`Y]bYf`Ghi`X]Y`Ui`g`XYa`>\f`&\$&%`Z0\`fhYb`+) i`XYf`XYi`hgWYb
6Yj`0`_Yfi`b[`XYb`6Ygi`W`Y]bYg`Nccg`Ui`Z]\fYf`@]ghY`XYf
: fY]nY]hU`_hj`]hA`hYb`Ub" ; `Y]W`nY]h][`nY][`hYb`l`a`ZfU[Ybž`XUgg` , \$i
XYf`6Y`ZfU[`hYb`6YXYb`_Yb`]\bg]W`h]W`XYf`6YX]b[i b[Yb`Z0f`H]YfY

]b`Nccg`Äi » Yfb" J]Y`Y`ZcfXYfb`HfUbgdUfYbn`]b`6Yni [`Ui Z`X]Y
<U`hi b[gVYX]b[i b[Yb`i bX`X]Y`<Y[Y`XYf`H]YfY"8Yf`l bhYf]fX]gW`Y
Ncc`_ÖbbhYž`a]h`gY]bYa `]bbcj Uh]j Yb`5bgUhnž`U`g`d cg]hj Yg
6Y]gd]Y`X]YbYbž`k]Y`X]Y`² ZZYbh`]W`_Y]hi bX`Ncc`c[]gW`Y
9]bf]W`hi b[Yb`Y]bY`6U`UbW`nk]gW`Yb`l bhYf`U`hi b[gUb[YVchYb
i bX`H]YfgW`i hn`gW`UZZYb`_ÖbbYb"

9]b`k Y]hYfYf`5gdY`h`]gh`X]Y`6YXYi hi b[`j cb`Nccg`ZØf`XYb
5fhYbgW`i hn`B UW`5b[UVYb`XYf`K cf`X`5ggcW]Uh]cb`cZ`Nccg`UbX
5ei Uf]i a g`fK 5N5Ł`UVYb`Nccg`i bX`5ei Uf]Yb`k Y`hk Y]h]b`XYb
`YnhYb`š\`fYb`XUni `VY][YhfU[Ybž`ØVYf`) \$`5fhYb`k]YXYf`]b`]fY
bUhØf`]W`Yb`@YVYbgfÄi a Y`Y]bni ZØ`fYb" `Gc`W`Y`GhUh]gh]_Yb
i bhYfa Ui Yfb`X]Y`Fc`Y`j cb`Nccg`b]W`h`bi f`U`g`l bhYf`U`hi b[gc f h ž
gcbXYfb`Ui W`U`g`5_hYi fY`]a `]bhYfbUh]cbU`Yb`5fhYbgW`i hn"

8YhU]`g

6Ygi W`Yb`G]Y`i bg`Ui Z.`X]Y!b UW`f]W`hYb"bYh